

Claims

[c1] I claim:

1. A method of positing a seal in a groove in an axial bore of a housing comprising the steps of:

initially placing a cylindrical seal on a projection that extends from a first end of a cylindrical body of a tool, said tool having first and second axial bores that located in an arcuate plane with respect to the axis of said cylindrical body and extending from said first end to a second end of said cylindrical body;

inserting a first pin in said first axial bore such that an end thereon extends past the first end of said cylindrical body and said cylindrical seal;

applying a radial force to said cylindrical seal to deform said cylindrical seal with respect to said projection and said end of first pin into an approximate C-shape, said C-shape cylindrical seal having an overall dimension that is smaller than a diameter of said cylindrical body;

inserting a second pin in said second axial bore such that an end thereon extends past the first end of said cylindrical body to retain said cylindrical seal in said C-shape;

inserting said cylindrical body with said cylindrical seal with said C-shape into said axial bore of said housing until said cylindrical seal is in radial alignment with said groove;
removing said first and second pins from said cylindrical body such that said cylindrical seal resiliently expands from said C-shape to a circular shape to fill said groove; and
retracting said cylindrical body from said axial bore to complete the installation of the seal in the housing.

[c2] 2. The method as recited in claim 1 wherein the step of inserting the cylindrical body into the axial bore includes:

bringing a lip on said cylindrical body into engagement with said housing to radial align the cylindrical seal with the C-shape with said groove;

[c3] 3. The method as recited in claim 2 further including a step of :locating a spacer on said cylindrical body if necessary to achieve radial alignment of the cylindrical seal with the C-shape with said groove.

[c4] 4. The method as recited in claim 1 wherein said step of applying a radial force to deform said cylindrical seal is achieved by radially moving an axial third pin until said

third pin is in axial alignment with said second axial bore and then axially moving said third pin into said second axial bore to establish said C-shape in said cylindrical seal.

[c5] 5. The method as recited in claim 1 wherein said step of inserting a second pin in said second axial bore includes the additional step of:

engaging said third pin to move said third pin out of said second axial bore and bringing said second pin into engagement with said cylindrical seal to maintain said C-shape therein.

[c6] 6. The method as recited in claim 1 wherein said step of removing said pins from said cylindrical body further includes the additional step of:

rotating said cylindrical body to assist in the seating of said cylindrical seal in said groove.

[c7] 7. The method as recited in claim 1 said step of:
locking said first and second pins with respect to said cylindrical body to maintain said first ends thereof in a fixed location during the insertion into said cylindrical body.

[c8] 8. A method of positioning a seal in a groove of a bore in a housing comprising the steps of:

placing a cylindrical seal on a plurality of projections that extend from a cylindrical body;
radially moving at least one of the projections to deforming the cylindrical seal into a C-shape;
inserting the cylindrical body into the bore until in the deformed cylindrical seal is in radial alignment with the groove; and
axially retracting at least the one projection to allow the cylindrical seal to radially expand from the C-shape to a circular shape and fill the groove to complete the location in the housing.